New Jersey Department of Environmental Protection
Water Resource Management
Water Monitoring and Standards

Stakeholder Meeting: Surface Water Quality Standards

April 15, 2015 (9:30 AM – 11:30 AM)

Agenda

Facilitator Kerry Pflugh

Presenters Barbara Hirst / Biswarup Guha - Bureau of Environmental Analysis Restoration and Standards, Division of Water Monitoring and Standards

Pilar Patterson / Susan Rosenwinkel - Surface Water Permitting, Division of Water Quality

I. Introduction and Background

II. Recreational Criteria Amendments
Facilitator discussion
Contemplated topics:
- Illness rates
- Applicability – Seasonal or year round
- Indicator pathogen – Enterococcus in fresh as well as marine waters or Enterococcus in marine and E. Coli in fresh waters

III. Nutrients/Total Phosphorus amendments
Facilitator discussion
Contemplated topics:
- Implementation strategy for NJPDES on tidal freshwater
- Options to ensure continued protection of designated used both in receiving and downstream waters when dischargers demonstrate that waters are not rendered unsuitable.

IV. Ammonia Criteria for Freshwaters
Facilitator discussion
Contemplated topics:
- Options for implementation and implications

V. Wrap up Next Steps

Comparison of Current NJ/EPA Recreational Criteria

In 2012 EPA updated recreational water quality criteria for all surface waters. The tables below provide a comparison between the current NJ criteria and EPA recommendations for marine and freshwaters. More information regarding EPA criteria can be found at *http://water.epa.gov/scitech/swguidance/standards/criteria/health/recreation/index.cfm* .

COMPARISON OF NJ AND EPA RECREATIONAL CRITERIA
MARINE WATERS (ESTUARINE AND COASTAL WATERS)

Indicator – Enterococcus*	**NJ Current** 19 illness/1000	**EPA Option 1** 36 illness/1000	**EPA Option 2** 32 illness/1000
Geometric mean	35/100 ml	35/100 ml	30/100 ml
STV[1]	N/A	130/100 ml	110/100 ml
SSM[2] (beach notification/ additional monitoring only)	104/100 ml	N/A	
Sampling frequency	Minimum 5 in 30 days	Not specified	
Averaging period	Seasonal	30 days	
Applicability	Year round	Seasonal or year round	

* 2012 EPA recreational criteria allow Enterococcus to be used as indicator organism as well as its associated thresholds in both fresh and marine waters; however, the same illness rates should be used in fresh and marine waters.

FRESHWATERS – RIVERS, STREAMS, LAKES

Indicator – *E. coli*	**NJ Current** 8 illness/1000)	**EPA Option 1** 36 illness/1000	**EPA Option 2** 32 illness/1000
Geometric mean	126/100 ml	126/100 ml	100/100 ml
STV[1]	N/A	410/100 ml	320/100 ml
SSM[2] (beach notification/ additional monitoring only)	235/100 ml	N/A	
Sampling frequency	Minimum 5 in 30 days	Not specified	
Averaging period	Seasonal	30 days	
Applicability	Year round	Seasonal or year round	

[1] Statistical threshold value: 90th percentile of water quality distribution.
[2] Single sample maximum: Used for beach notification and additional monitoring determination

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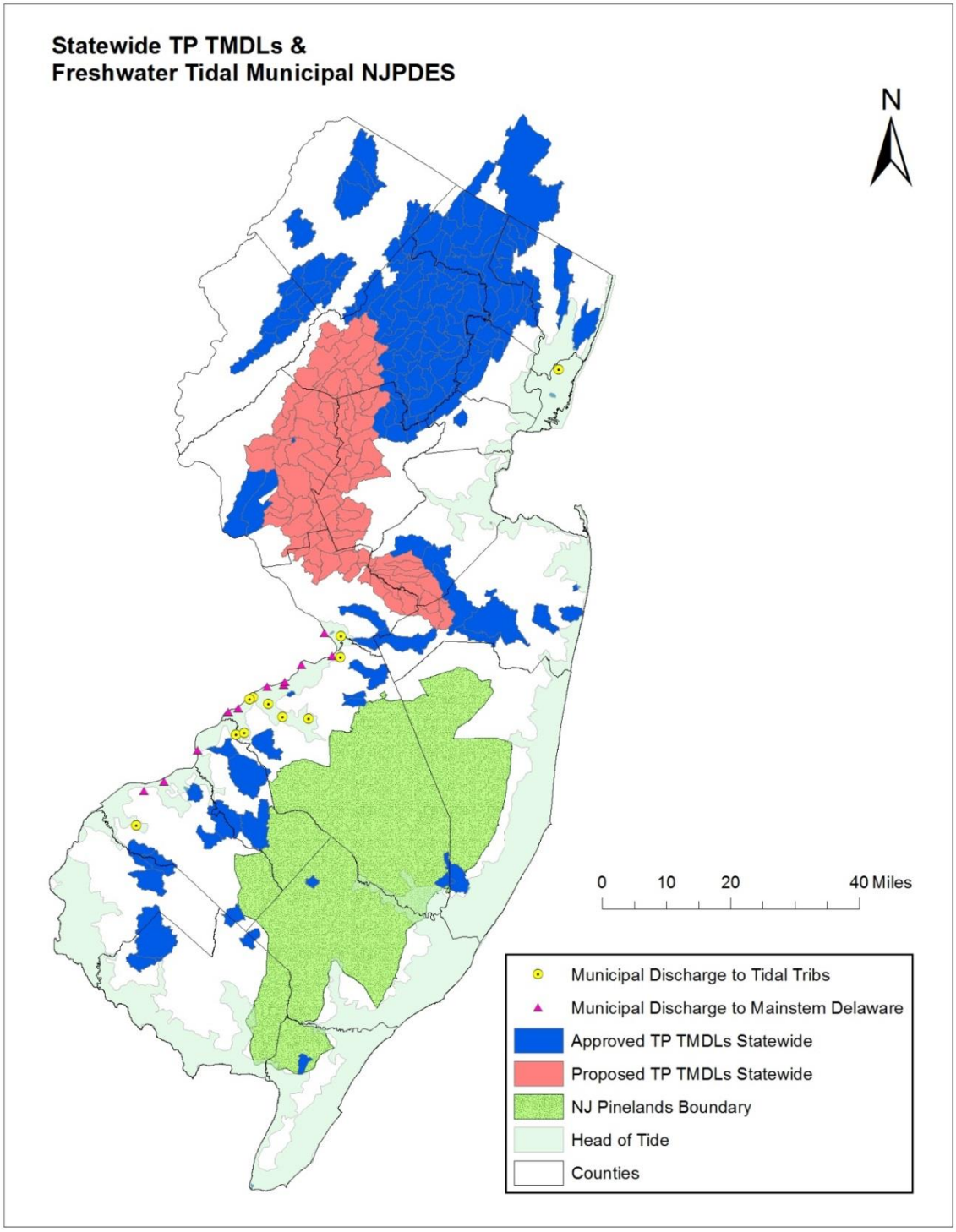
Total phosphorus criterion of 0.1 mg/L is applicable to freshwaters streams outside of Pinelands and TMDL areas.



Comparison of NJ current / EPA Ammonia Criteria

In 2013 EPA updated Ammonia criteria for freshwaters based on sensitive mussels and snails. The most sensitive species found to be unionid mussels and gill-breathing snails. The species used by EPA are more sensitive than those used for NJ criteria and the criteria are more stringent than the existing NJ criteria. Below is an example comparison of existing NJ and EPA criteria. More information regarding EPA ammonia criteria can be found at http://water.epa.gov/scitech/swguidance/standards/criteria/aqlife/ammonia/.

Example Comparison of Freshwater Ammonia Criteria
(mg/L at 20º C and pH 7)
NJ (2000) Vs EPA (2013)

Stream Classification	CMC or Acute Criteria		CCC or Chronic Criteria	
	Existing NJ	EPA Recommended	Existing NJ	EPA Recommended
FW2-TP & TM	22.3	17	5.72	1.9*
FW2-NT	25 (summer) 28.8 (winter)		6.71 (summer) 7.46 (winter)	

* Not to exceed 4.8 mg TAN/L (at pH 7and 20°C) as a 4 day average within 30 days.